

REMARKS

Claims 1 - 7, 9 - 14, and 16 - 20 have been amended. No new matter is introduced with these amendments, which are supported in the specification as originally filed. Claims 8 and 15 have been cancelled from the application without prejudice (and their subject matter has been incorporated into Claims 7 and 14, respectively). Claims 1 - 7, 9 - 14, and 16 - 20 remain in the application.

I. Rejection under 35 U.S.C. §101

Paragraph 2 of the Office Action dated February 28, 2005 (hereinafter, "the Office Action") states that Claims 1 - 20 are rejected under 35 U.S.C. §101 as being directed to non-statutory subject matter. In particular, paragraph 3 further states that Claims 1 - 13 are "not tangibly embodied in a manner so as to be executable", and paragraph 4 further states that Claims 14 - 20 "can be practiced mentally".

Independent Claim 7 has been amended to specify "at least processor" and "means for computing whether execution of a plurality of tasks by the at least one processor is feasible" (Claim 7, lines 2 - 4; emphasis added). The preamble of Claims 14 - 20 has been amended to specify that the method is "computer-implemented", as suggested in paragraph 4.

This rejection is respectfully traversed with regard to Claims 1 - 6, which specify (in the preamble) "... the computer program product embodied on one or ore computer readable media" (emphasis added). Applicants respectfully submit that this claim language meets the requirement

specified in paragraph 3.

Applicants therefore respectfully submit that their claims are directed toward statutory subject matter, and respectfully request that the §101 rejection be withdrawn.

II. Rejection under 35 U.S.C. §103(a)

Paragraph 6 of the Office Action states that Claims 1 - 20 are rejected under 35 U.S.C. §103(a) as being unpatentable over U. S. Patent 6,687,257 to Balasubramanian. This rejection is respectfully traversed.

Balasubramanian uses a pre-allocated, system-wide window of time, and allocates time from this system-wide window to execution of interrupts as those interrupts occur. See, for example, the following:

- Fig. 10 (illustrating a single system-wide interrupt window timer 126);
- Fig. 11, showing how this interrupt window timer is checked (at Block 132) when processing interrupts, and indicating that when the time allocated to this system-wide window has been exhausted (i.e., a "no" result at Block 132), interrupts are no longer processed until the window is "renewed" at Block 138 (where "renewing" the window comprises resetting its allocated time, as discussed at col. 13, lines 43 - 44 and lines 65 - 67, and col. 14, lines 17 - 20);
- col. 13, lines 54 - 57 (referring to interrupt window timer 126 as a "pre-allocated window of time for processing interrupts") and lines 57 - 65 (stating that this

window is “a percentage of [all] processing time or bandwidth of processor 26 [that is] reserved for interrupts”, emphasis added, and that the “exact value ... is selected by the ... programmer ... [and] subtracted out [from the time available for execution of application programs] prior to allocation to the various application programs”, emphasis added); and

- col. 14, lines 2 - 5 (discussing a check to see if any interrupt-processing time remains available), lines 7 - 9 (stating that the interrupt’s execution time is subtracted from the system-wide timer, if available interrupt-processing time remains), lines 17 - 20 (stating that processing of the interrupt is delayed until sufficient time is available by resetting the window), and lines 22 - 27 (re-stating that the time allocated to the interrupt window is time subtracted from the processor’s bandwidth – i.e., this subtracted time is no longer available for allocation to user tasks).

Applicants’ claimed invention does not use this single, system-wide interrupt timer window approach. Instead, Applicants’ independent Claims 1, 7, and 14 specify limitations of “computing a task-specific maximum cost extension allowable for a subsequent execution of each” of a plurality of tasks, and then using those cost extensions “upon determining that any of the schedulable tasks exceeds its associated cost during its subsequent execution ... as an upper limit on additional allowable execution time for the task” (see Claim 1, lines 7 - 8 and lines 15 - 18; emphasis added). Balasubramanian does not teach these limitations.

Lines 3 - 9 on Page 4 of the Office Action (referring to col. 14, lines 20 - 29 of Balasubramanian) state that "the allocated bandwidth for each task is the revised cost for each task because the additional time has been included". In this interpretation, "task cost" refers to an after-execution determination of how long a task executed. Applicants have amended their independent claims to clarify that what is being computed in their claimed invention is a "task-specific maximum cost extension" that is allowable "for a subsequent execution" of the task (Claim 1, lines 7 - 8, emphasis added).

Furthermore, Applicants' independent claims have been amended to clarify that the cost extensions computed for all the tasks, "when taken together, allow the execution of the plurality of tasks to remain feasible" (Claim 1, lines 8 - 11, emphasis added). Balasubramanian has no such concept and, as discussed above, uses an approach where all interrupts are processed but some may be delayed until more time is allocated to interrupt processing by renewing/refreshing window timer 126.

Accordingly, Applicants respectfully submit that Balasubramanian fails to teach limitations of their independent Claims 1, 7, and 14. These claims are therefore deemed patentable over the reference, as are their dependent Claims 2 - 6, 9 - 13, and 16 - 20. The Examiner is therefore respectfully requested to withdraw the §103(a) rejection.

III. Conclusion

Applicants respectfully request reconsideration of the pending rejected claims,

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withdrawal of all presently outstanding rejections, and allowance of all remaining claims at an early date.

Respectfully submitted,



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